

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s):

R. FURUKAWA, et al

Application No.:

0/699,690

Filed:

November 4, 2003

For:

METHOD FOR MANUFACTURING SEMICONDUCTOR

INTEGRATED CIRCUIT DEVICE

Group:

2818

Examiner:

Q. Hoang

## SUBMISSION UNDER 37 CFR § 1.114 (INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR § 1.97 AND § 1.98)

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450 October 18, 2004

Sir:

Pursuant to Applicants' duty of disclosure, and concurrently with the filing of a Request For Continued Examination (RCE) Transmittal, enclosed please find documents for consideration during further examination of the above-identified application. Also enclosed are respective pages of drawing figures from the respective documents, indicating (in English) structure shown therein and English abstracts of these documents. Further enclosed is a Form PTO/SB/08A, listing the enclosed documents.

As indicated previously, this Information Disclosure Statement is being submitted concurrently with the filing of an RCE Transmittal in the above-identified application. Clearly, requirements of 37 CFR § 1.97(b) are satisfied.

To the extent that the enclosed documents are not in English, it is respectfully submitted that requirements of 37 CFR § 1.98(a)(3) are satisfied by the enclosed indication in English of structure in various drawing figures, enclosed English Abstracts and the following comments.

Thus, in Japanese Patent Document No. 2001-284463, attention is respectfully directed to Fig. 4(e). This figure shows 25a which is a silicon oxynitride film (a first insulating film), 26 which is a high dielectric film (a second insulating film) and 21a which is a silicon nitride film (a third insulating film). The silicon nitride film 21a (the third insulating film) is formed by nitriding the surface of the substrate (note Fig. 4(a).

It is respectfully submitted that the applied Japanese patent document does not disclose, nor would have suggested, the structure including the third insulating film, formed by oxidizing the semiconductor substrate.

In Japanese Patent Document No. 2001-298095, attention is respectfully directed to Fig. 2(f). In this figure, reference character 5 is a silicon oxide film (a first insulating film); 9 is a high dielectric film (a second insulating film); and 6 is a silicon oxide film containing nitrogen (a third insulating film). The silicon oxide film containing nitrogen is formed by oxidizing a silicon nitride film 4, as seen in Fig. 2(c).

It is respectfully submitted that this reference does not disclose, nor would have suggested, such a device as in the present claims, including wherein the third insulating film is formed by oxidizing the semiconductor substrate.

Consideration of the enclosed documents, upon further examination of the above-identified application, is respectfully requested.

Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to the Deposit Account No. 01-2135 (Case No. 501.42174VX1), and please credit any excess fees to such Deposit Account.

Respectfully submitted,

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Substitute for form 1449A/PTO				Complete if Known		
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VC/ INFORMATION DISCLOSURE				Filing Date	11/4/2003	
	TATEMENT BY AP	PLIC	CANT	First Named Inventor	R. Furukawa, et al.	
AN STATEMENT BY APPLICANT				Art Unit	2818	
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Sheet 4	1	of	1	Attorney Docket Number	501.42174VX1	

TRACE U.S. PATENT DOCUMENTS						
Examiner Initials'	Cite No. <sup>1</sup>	Document Number  Number-Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	
		US-				
		US-				

FOREIGN PATENT DOCUMENTS						
Examiner Initials'	Cite	Foreign Patent Document  Country Code <sup>3</sup> –Number <sup>4</sup> –Kind Code  Sift known)	Publication Date  MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	Abstract
		JP 2001-298095	10/26/2001	NEC Corp.		X
		JP 2001-284463	10/12/2001	NEC Corp		Χ

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>	
		Fig. 4(e) of JP No. 2001-284463 with indication in English		
		Fig. 2(f) of JP No. 2001-298095 with indication in English		

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Applicant's unique citation designation number (optional). Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 120 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing the this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450.

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